32 -TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION (TENS) APLICATION AS ANALGESY TECHNIQUE DURING POST-OPERATORY PHYSIOTHERAPY IN PATIENTS WITH TOTAL HIP ARTHROPLASTY

JULIANA HERING GENSKE,
RODRIGO DANIEL GENSKE,
CARLOS PUKALESKI,
JOSEANE RODRIGUES DA SILVA,
JOSUÊ BRUGINSKI DE PAULA (ORIENTADOR)
Pontifícia Universidade Católica do Paraná, Curitiba/PR, Brasil
juliana.hering@terra.com.br

ABSTRACT

Total Hip Arthroplasty (THA) is a common procedure in the present time, especially due to the raise of the population's life expectancy. Elderly patients are great candidates to this surgical procedure and also very vulnerable, in relation to the surgery risks themselves, just like the action of the medicine in the post-operatory. Non-pharmacological resources such as the Transcutaneous Electrical Nerve Stimulation (TENS) are being greatly studied and used by physiotherapy in post-surgical patients. This research's main objective was to verify the influence of the TENS as coadjutant in the cemented THA post-operatory pain relief. The sample (n=23) was consisted of patients in the first post-operatory day of hip arthroplasty, between 60-80 years old, that were divided into two groups, the control group (n=11) received placebo treatment and the treatment group (n=12) received effective electric analgesia. Both groups received the same medicinal therapy, health care routine and physiotherapeutic protocol. The pain was measured through the visual analog pain scale and the McGill pain questionnaire in 3 steps (in the first and second post-operatory days); before the TENS application, immediately after the application of this resource, and after the physiotherapy (made after the TENS). As an indirect way of evaluating the analgesia, it was also registered the quantity of demanded analgesic medicine of each group. The results show that the treatment group showed enhancement of the pain levels ($p>0,05$), just as less necessity of analgesic medicine administration, what allows to conclude that the TENS is an efficient coadjutant resource in the post-operatory analgesia during the physiotherapy in elders submitted to THA.

INTRODUCTION

The osteoarthritis (OA) is a multi-factorial chronic-degenerative infirmity that promotes joint cartilage alteration leading it to inflammation, pain and a progressive functional incapacity, making it the most common muscular-skeletal disease in the whole world1.

The osteoarthritis treatment can be conservative, with analgesics and physiotherapy, or surgical, with the hip arthroplasty, in which the total or partial joint reposition is done. When the conservative procedure fails in the mobility restoration or in the pain diminution, a surgical intervention is frequently the treatment choice.

The main concern after the total hip arthroplasty is to make the patient walk. Although the deambulation may be brief, the physiotherapist's role consists in encouraging the mobility, exercises, weight support and adequate walking, as well as orienting the patient about how to lie down and get up from the bed in an appropriate manner2.

But, the pain in the post-operatory period commonly is a factor that limits the patient to walk precociously.

The physiotherapy affords, in its clinical practice, many non-pharmacological analgesic resources, among them the Transcutaneous Electrical Nerve Stimulation (TENS). The TENS represents a noninvasive therapeutic modality, of easy handling, that doesn't present collateral effects or interaction with the medicaments, being used for the pain relief by peripheral nerves stimulation through the application of an electric current of low frequency, from 1HZ to 250HZ, through electrodes in the skin surface, with the purpose of influencing and modulating the pain neuroconduction process and acting on the liberation of endogenous opioids on spinal levels and of the hypophysis3,4.

Though the use o TENS has been studied a lot in post-operatories since the 70's, it's a therapy that presents some opinion divergences in relation to its analgesic power3. One of the main critics to the electric stimulation studies where the efficiency was not demonstrated is that the investigator didn't use the right parameters of stimulation4,5.

Thus, the objective of this study it to verify the influence of using the Transcutaneous Electrical Nerve Stimulation (TENS) as coadjutant in the cemented total hip arthropasty post-operatory pain relief, during and after the physiotherapy session through the Visual Analog Scale (AVS), the McGill pain questionnaire (MPQ) and observe if pain simultaneously reduces the necessity of analgesic pharmacologic administration.

METHODS

The current research took place at the University Hospital of the West of Paraná (UHWP) in Cascavel, after approval of the Committee of Ethic in Research of the reported institution.

2.1 Sample

The population of the present research was composed of 23 interned patients in the orthopedics and traumatology sector of the UHWP, between June and December of 2008, which obeyed the following inclusion criteria:

a)age between 60 and 80 years old, interned in the G3 sector of the UHWP;

b)both genders;

c)to have previous consent by the assistant doctor attesting clinical conditions to participate in the research;

d)first day of post-operatory of cemented Total Hip Arthoplasty, of aterolateral surgical access;

e)surgical procedure realized in the morning period and which the anesthesia has been made exclusively through spinal anesthesia using bupivacaine cloridrate (0,5%) assorted with morphine and etilephrine (blood vessel-constrictor).

It was considered the following exclusion criteria in the sample: use of pacemaker; prolonged use of opioids (in the pre-operatory); cognitive alteration; sensitive deficit in the perioperatory region; neoplasm on infectious disease; vital signals out of the normal parameters; patients with transoperatory intercurrences in relation to the anesthesia, hemostasia and used operatory technique; patients that needed assistance in the Intensive Care Unit (ICU), during hospital interment; patients that during the post-operatory, needed other not previously prescribed medication; patients with previous knowledge about the TENS.

The participants of this study, after being include in it, were randomly divide into 2 groups.

a) control group (CG) – constituted by individuals that didn't receive electric-analgesia. They received placebo TENS therapy (with the equipment off);

b) experimental group (EG) – constituted by individuals that received electric-analgesia through TENS.

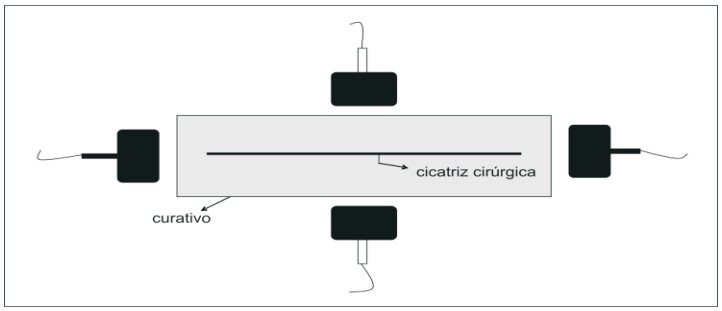
2.2 Procedures

In this research a Neurodin transcutaneous electrical nerve stimulation device was used, manufactured by IBRAMED, portable, micro-controlled, with 2 channels and 4 rubber electrodes with 3x5 cm each. Also a zipping protection cloak was used during the research to cover the TENS device, to impede the patients from seeing the controls and settings used.

The experimental group received TENS stimulation in the conventional mode, with frequency of 85Hz and intensity inside the patient limits according to most of the studies revised by Bjordal, Johnson and Ljunggreen5 and pulse duration of 60 s, that was oriented to feel a strong stimulus, intense, but without causing pain, with the duration of 45 minutes6, with periodical intensity adjustment due to accommodation.

The electrodes were coupled to the patient's skin with ultrasound gel and affixed with tape, in the skin cleaned previously with cotton and alcohol 70%. The electrodes were affixed approximately 7,5 cm of the surgical scar edges, a pair of electrodes were placed in parallel to the surgical incision and the other one, perpendicularly3, according schematic representation (Picture 1). In the control group, the electrodes were affixed in the same way, though the device remained off (placebo).

In order to the patients of the control group believed they were receiving an effective therapy, the TENS was turned on for a couple of seconds with the current in a low intensity and after it the device was turned off. During the session, the patients were frequently questioned if the kept on feeling nothing.



Picture 1 – Schematic representation of the electrodes disposition.

Both groups were initially treated with the same medicamentose therapy: intravenous tenoxicam 20 mg, first generation cephalosporins, heparin and ranitidine.

All the patients had an intravenous sodium dipyrone prescription, each 6 hours, in case of pain. The sodium dipyrone, during the day, was only administered when there was necessity and, in this case, it was registered. At night, the patients received dipyrone each 6 hours, but from 2 a.m. on this administration was suspended in order to, when initiating the physiotherapeutic approach, the patient didn't demonstrate interference of this medicine in the analgesia.

Personal data from the patient, MPQ and VAS data, and the quantity of medicament administered to the patient up to the third day of post-operatory were collected, date in which most of the patients are discharged from the hospital, after hip arthroplasty, in the UHWP.

2.2.1 First post-operatory day

In the next day after the surgery, the patients were submitted to the following routine: bed bath by the nursing team, in the beginning of the morning, followed by TENS stimulation and after, motor physiotherapy for the experimental group. The control group had the same routine, however the TENS application was simulated (placebo therapy).

The motor physiotherapy, equal for both groups, consisted of inferior member's metabolic exercises, passive mobilization of the operated member with knee and hip flexo-extension inside the patient's amplitude limit and isometric quadriceps exercises. After the exercises, the patient was settled in an armchair.

The MPQ and VAS application was realized by a blind-evaluator who didn't know the researches objectives and executed this task with all the patients. This evaluation instruments were used in three periods, in both groups (CG and EG): before the TENS application, immediately after the TENS application and after the physiotherapy.

After the physiotherapy, the patients were medicated by the nursing team with tenoxicam and if necessary, during the day, with dipyrone for analgesia.

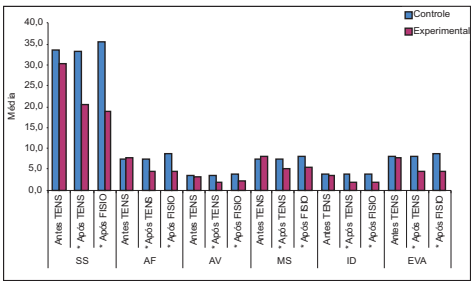
2.2.2 Second post-operatory day

In the second day after the surgery, the patients had the same routine of the first post-operatory day; however the bath was in the shower, and after the already described procedures, the patient was put in a standing position and encouraged to take some steps with the help of a fixed kind of walker and, finally, he was settled in a armchair. The MPQ pain questionnaire and the VAS were applied in three periods, with a blind-evaluator, according to the first day.

RESULTS

The statistic analysis of this study was made through the Student's t-test for independent samples, variance analysis (ANOVA) and Tukey's post hoc test, for the significance level of 5% (p-value $\leq$0,05).

The Picture 2 presents the average between the control and the experimental group in each one of the evaluated periods (before the application of TENS, after the application of TENS and after physiotherapy) in the first day, for each one of the MPQ describers: sensorial (SS), affective (AF), miscellaneous (MS) and pain indices (ID); besides the VAS data. Before the TENS application there wasn't significant difference in any of the describers between the control and the experimental group. After the TENS application and also after the physiotherapy, all the describers presented significant difference between the control and the experimental group, and the average was always superior for the control group. Though, the Variance Analysis (ANOVA) didn't show significant difference for the miscellaneous (MS) describer.

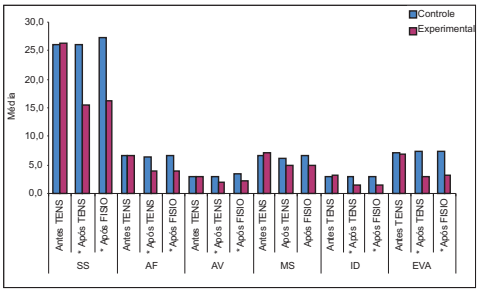


Picture 2 – Average of each one of the describers in the first day of evaluation between the control and the experimental

groups.

(*) significance (p-value<0,05)

The picture 3 presents the average between the control and the experimental group in each one of the evaluated periods in the second day for each one of the describers. Before application of the TENS there wasn't significant difference in any of the describers between the control and the experimental group. After the TENS application and also after physiotherapy, only the miscellaneous (MS) describer didn't show significant difference between the control and the experimental groups.



Picture 3 – Average of each one of the describers in the second day of evaluation between the control and the experimental groups.

(*) significance (p-value<0,05)

The control group requested larger analgesic complementation with dipyrone in relation to the experimental group, in both days of post-operatory, according to the Chart 1.

Chart 1 – Average dipyrone administration between the control and the experimental group, in the first and second day of post-operatory.

	Average	Standard Deviation	*p*-value
1st PO - Control	2,82	0,40	0,02*
1stPO - Experimental	2,33	0,49	
2nd PO - Control	2,91	0,30	0,00*
2nd PO - Experimental	2,17	0,39	

* Students' t test for independent samples, significant to the level of 5% (p-value<0,05).

DISCUSSION

In the beginning of the experiment, in confrontation with the AVS acquired data, it was observed that the related pain through the MPQ was of great intensity and with similar characteristics in both groups. After the TENS application, it was evidenced not only the diminution of pain intensity in the experimental group (through VAS) but also the changing of the characteristics of this pain (through MPQ), what didn't occur in the control group.

Although the level of pain significantly decreased in the experimental group, in both days, and, although the other characteristics (sensorial, affective and evaluative) have gone through changes after the experiment, most of the patients (83%) described the algic sensation in the surgical scar as “penetrating”, making this describer belongs to the group named miscellaneous (MS) in the MPQ, only parameter that didn't have significant differences in the evaluated period s in this research. The fact that all the patients have been submitted to the same surgical procedure and the difficulty of associating their painful experiences with the other describers of this group contributed for this outcome.

The present study was randomized, using placebo as control, beyond the comparison with the analgesic supplementation with dypirone, when necessary. The electro-stimulation parameters used were of a 85Hz frequency3,5, 60 s6 pulse, painless strong intensity3,5, for 45 minutes3,6. The sample was homogeneous in both groups, all the patients went through the same surgical procedure, medicamentose therapy and care routine, therefore, decreasing the number of variables among the subjects.

Carrol et al, in a systematic review of the TENS use on acute post-operatory pain, conclude that the TENS is not effective, because most of the studies that presented favorable results were not randomized. In their review, only 2 of the 17 randomized and controlled studies presented positive results with the TENS application7.

Bjordal et al, in a meta-analysis, defended the efficiency of the TENS and criticized the studies that didn't obtain success claiming that they used inadequate stimulation parameters and that the systematic reviews such as Carrol et al's didn't exclude these studies. He concludes in his study that the TENS requires high current intensity and high frequency (85Hz) to be efficient in the post-operatory pain analgesia5.

Two systematic reviews4,8 point divergences in relation to the use of the TENS. The literature is pretty controverse and the main factors that contribute to this controversy are the lack of studies with placebo, studies that use comparison with other form of treatment or where the parameters are not specified, like the intensity and the frequency of the current, the pulse duration and the electrode disposition4. The sample is many times not homogeneous, using many kinds of pathologies and individuals with age discrepancy, what can affect the results of the study8.

Many studies use as control, patients that didn't receive anything or compared their studies with other treatments, what can lead to the conclusion that the TENS is not more effective than another treatment employed, but it can be equally effective4.

Bjordal et al point that many studies that compare the efficiency of the TENS with the quantity of analgesic medicaments consumed can also have obscure results. Many studies utilize the administration of patient-controlled analgesic, where the patient has free access to the medicament. As many times the TENS promotes partial pain relieve, the patient ends up using analgesic complementation as another medicament5.

In the present study, the analgesic complementation (with dipyrone) was made only if necessary, by the nursing team. The patient didn't have free access to the medicament, but in case of intense pain, he received the medication and it was registered in the prompt-book for control. Both groups requested analgesic complementation. As the patients only received electro-stimulation in the morning, the necessity of analgesic supplementation during the day is acceptable. Nevertheless, the patients of the experimental group required smaller quantity of complement analgesic medication.

The obtained results demonstrated the efficiency of the employed technique with the stimulation parameters here

described (85Hz of frequency, pulse of 60 s, with painless strong intensity, during 45 minutes). A significant pain intensity reduction was obtained, confirmed not only by the acquired data with the VAS, but also by the MPQ, and the analgesia had favorable post-effect that allowed the realization of physiotherapy without significant pain increase. Although these results reinforce that the TENS don't produce complete post-operatory pain relief, the residual pain was of a smaller intensity and well tolerated by most of the patients of the experimental group, frequently referred as “tingling” and “discomfort”.

The great quantity of articles referring to pharmacologic and not-pharmacologic analgesic resources reinforce the idea that there isn't only one way of dealing with post-operatory pain and that avoiding the monotherapy, that is, employing 2 or more of these resources tend to improve the quality of analgesia and to reduce the incidence of adverse resources9.

CONCLUSION

Based on the obtained results, it can be concluded that the TENS is a coadjutant and efficient resource in the post-operatory analgesia of hip arthroplasties during the physiotherapy.

KEY WORDS: Analgesia. Arthroplasty, Replacement, Hip. Transcutaneous Electric Nerve Stimulation. Physical Therapy Modalities.

REFERENCES

1. RICCI, Natália Aquaroni; COIMBRA, Ibsen Bellini. Exercício físico como tratamento na osteoartrite de quadril: uma revisão de ensaios clínicos aleatórios controlados. Rev. Bras. Reumatol., São Paulo, v. 46, n. 4, Aug. 2006 . Available from <http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0482-50042006000400007&lng=en&nrm=iso>. Access on 05 Aug. 2007.

2. BRIMER M. Artroplastia coxofemoral total. In: Kauffman TL, editor. Manual de reabilitação geriátrica. Rio de Janeiro: Guanabara Koogan; 2001. p.86-91.

3. FERREIRA, Cristine Homsi Jorge; BELEZA, Ana Carolina Sartorato. Abordagem fisioterapêutica na dor pós-operatória: a eletroestimulação nervosa transcutânea (ENT). Rev. Col. Bras. Cir., Rio de Janeiro, v. 34, n. 2, apr. 2007 . Available from <http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0100-69912007000200012&lng=pt&nrm=iso>. Access on : 19 Jul. 2007.

4. SLUKA, Kathleen A.; WALSH, Deirdre. Transcutaneous Electrical Nerve Stimulation: Basic Science Mechanisms and Clinical Effectiveness. The Journal of Pain, v. 4, n. 3, apr. 2003. Available from: http://www.jpain.org/article/S1526-5900(03)00484-X/pdf. Access on: 24 Jul. 2008.

5. BJORDAL, Jan Magnus; JOHNSON, Mark I.; LJUNGGREEN, Anne Elisabeth. Transcutaneous electrical nerve stimulation (TENS) can reduce postoperative analgesic consumption. A meta-analysis with assessment of optimal treatment parameters for postoperative pain. A meta-analysis with assessment of optimal treatment parameters for postoperative pain. Eur J Pain, v. 7, n. 2, Aug. 2003.

6. TRIBIOLI, Ricardo Alexandre. Análise crítica atual sobre a TENS envolvendo parâmetros de estimulação para o controle da dor. Ribeirão Preto: Universidade de São Paulo, 2004. Originalmente apresentada como dissertação de mestrado. Available from: http://www.teses.usp.br/teses/disponiveis/82/82131/tde-10092003-094654. Access on: 19 Jul. 2007.

7. CARROL, D. et al. Randomization is important in studies with pain outcomes: systematic review of transcutaneous electrical nerve stimulation in acute postoperative pain. British Journal of Anaesthesia, v. 77, n. 6, 1996. Available from: http://bja.oxfordjournals.org/cgi/reprint/77/6/798.pdf. Access on: 13 Aug. 2008.

8. CHERTESTON, Linda S. et al. Effects of TENS frequency, intensity and stimulation site parameter manipulation on pressure pain thresholds in healthy human subjects. Pain, v. 106, 2003. Available from: http://www.painjournalonline.com/article/S0304-3959(03)00292-6/pdf. Access on: 25 Jul. 2008.

9. BASSANEZI, Betina Sílvia Beozzo; OLIVEIRA FILHO, Antonio Gonçalves de. Analgesia pós-operatória. Rev. Col. Bras. Cir., Rio de Janeiro, v. 33, n. 2, abr. 2006 . Available from <http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0100-69912006000200012&lng=pt&nrm=iso>. Access on: 03 Jul. 2008.

Correspondence to: Monjoleiro, 69 – Recanto Tropical, Cascavel/PR, Brasil,
CEP: 85807-300.
Telephone number: (45) 3326-3399.
E-mail: juliana.hering@terra.com.br

TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION (TENS) APLICATION AS ANALGESY TECHNIQUE DURING POST-OPERATORY PHYSIOTHERAPY IN PATIENTS WITH TOTAL HIP ARTHROPLASTY

ABSTRACT

Total Hip Arthroplasty (THA) is a common procedure in the present time, especially due to the raise of the population's life expectancy. Elderly patients are great candidates to this surgical procedure and also very vulnerable, in relation to the surgery risks themselves, just like the action of the medicine in the post-operatory. Non-pharmacological resources such as the Transcutaneous Electrical Nerve Stimulation (TENS) are being greatly studied and used by physiotherapy in post-surgical patients. This research's main objective was to verify the influence of the TENS as coadjutant in the cemented THA post-operatory pain relief. The sample (n=23) was consisted of patients in the first post-operatory day of hip arthroplasty, between 60-80 years old, that were divided into two groups, the control group (n=11) received placebo treatment and the treatment group (n=12) received effective electric analgesia. Both groups received the same medicinal therapy, health care routine and physiotherapeutic protocol. The pain was measured through the visual analog pain scale and the McGill pain questionnaire in 3 steps (in the first and second post-operatory days); before the TENS application, immediately after the application of this resource, and after the physiotherapy (made after the TENS). As an indirect way of evaluating the analgesia, it was also registered the quantity of demanded analgesic medicine of each group. The results show that the treatment group showed enhancement of the pain levels (p>0,05), just as less necessity of analgesic medicine administration, what allows to conclude that the TENS is an efficient coadjutant resource in the post-operatory analgesia during the physiotherapy in elders submitted to THA.

KEY WORDS: Analgesia. Arthroplasty, Replacement, Hip. Transcutaneous Electric Nerve Stimulation.

APPLICATION DE LA NEUROSTIMULATION ÉLECTRIQUE TRANSCUTANÉE (NSTE) COMME TECHNIQUE D'ANALGÉSIE PENDANT LA PHYSIOTÉRAPIE APRÈS TRAITEMENT CHIRURGICAL CHEZ DES PATIENTS AVEC ARTHROPLASTIE TOTAL DE LA ANCHE.

RÉSUMÉ

Une arthroplastie totale de la hanche (ATH) est une pratique courante de nos jours, surtout en raison de l'augmentation

de la population de l'espérance de vie. Les patients âgés sont d'excellents candidats pour cette chirurgie et aussi très vulnérables, avec les risques de la chirurgie elle-même, ainsi que de médicaments dans la période post-opératoire. Caractéristiques non pharmacologiques, comme neurostimulation électrique transcutanée (NSET) ont été largement étudiées et utilisées pour la physiothérapie chez les patients après une chirurgie. Cette étude visait à vérifier l'influence de NSET comme adjuvant dans le soulagement de la douleur post-opératoire de ATH cimentée. L'échantillon (n = 23) comprenait des patients dans les premiers jours après l'opération pour l'arthroplastie de la hanche, âgés de 60 à 80 ans qui ont été divisés en 2 groupes, le groupe limite (n = 11) ont reçu une thérapie placebo et le groupe traitement (n = 12) electroanalgésie efective. Les deux groupes ont reçu la même thérapie de médicament, des soins de routine et de protocole de thérapie physique. La douleur a été mesurée en utilisant l'échelle visuelle analogique et le questionnaire douleur de McGill en 3 étapes (les premier et deuxième jours après l'intervention) avant l'application de NSET, immédiatement après l'application de cette fonctionnalité, et après la physiotérapie (effectuée après le NSET). Comme un moyen indirect d'évaluer l'analgésie a éte également enregistré la quantité de médicament analgésique poursuivi pour chaque groupe. Les résultats montrent que le groupe de traitement ont montré une amélioration du niveau de douleur (p> 0,05) et moins besoin de l'administration d'analgésiques, la conclusion est que le NSTE constitue un moyen efficace comme un complément de l'analgésie postopératoire pour physiothérapie chez les patients âgés subissant à ATH.

MOTS CLÉS: Analgésie. Arthroplastie de la hanche. Neurostimulation Electrique Transcutanée.

APLICACIÓN DE ESTIMULACIÓN NERVIOSA ELÉCTRICA TRANSCUTÁNEA (TENS) COMO TÉCNICA DE ANALGESIA DURANTE LA FISIOTERAPIA POSTOPERATORIA EN PACIENTES CON ARTROPLASTIA TOTAL DE CADERA

RESUMEN

La artroplastia total de cadera (ATC) es un procedimiento común hoy en día, especialmente debido al aumento de la esperanza de vida de la población. Los ancianos son grandes candidatos a esta cirugía y también muy vulnerables, con los riesgos de la cirugía en si, así como a la medicación en el período postoperatorio. Recursos no farmacológicos como la estimulación nerviosa eléctrica transcutánea (TENS) han sido ampliamente estudiados y utilizados para el tratamiento en pacientes después de la cirugía. Este estudio tuvo como objetivo verificar la influencia de la TENS como coadyuvante para el alivio del dolor postoperatorio de ATC cementada. La muestra (n=23) formada por pacientes en el primero día después de la cirugía, con edad entre 60-80 años que se dividieran en 2 grupos, el grupo control (n=11) recibieran tratamiento placebo y el grupo tratado (n=12) que recibieran el tratamiento con TENS. Ambos los grupos recibieran el mismo tratamiento farmacológico, la misma atención de rutina y el protocolo de fisioterapia. El dolor se medió utilizando escala analógica visual y el cuestionario de dolor de McGill en 3 etapas (en primer y segundo día después de la cirugía) antes de la aplicación de TENS, inmediatamente después del TENS y después de la fisioterapia (que se realizó después del TENS).Como una forma indirecta de evaluar la analgesia también se registró la cantidad de medicación analgésica demandados por cada grupo. Los resultados muestran que el grupo tratado tuvo una mejoría en los niveles de dolor (p<0,05) y menor necesidad de administración de analgésicos, la conclusión es que la TENS es un recurso eficaz como complemento de la analgesia postoperatoria durante la fisioterapia en ancianos sometidos a ATC.

PALABRAS CLAVE: analgesia, artroplastia de cadera, estimulación nerviosa eléctrica transcutânea.

APLICACÃO DE NEUROESTIMULAÇÃO ELÉTRICA TRANSCUTÂNEA (TENS) COMO TÉCNICA DE ANALGESIA DURANTE FISIOTERAPIA PÓS-CIRÚRGICA EM PACIENTES COM ARTROPLASTIA TOTAL DE QUADRIL

RESUMO

A artroplastia total de quadril (ATQ) é procedimento comum na atualidade, principalmente em virtude do aumento da expectativa de vida populacional. Pacientes idosos são grandes candidatos a esse procedimento cirúrgico e também bastante vulneráveis, frente aos riscos da cirurgia em si, assim como à ação dos medicamentos no pós-operatório. Recursos não-farmacológicos como a Estimulação Elétrica Nervosa Transcutânea (TENS) vêm sendo muito estudados e utilizados pela fisioterapia em pacientes pós-cirúrgicos. Este estudo teve como objetivo verificar a influência da TENS como coadjuvante no alívio da dor pós-operatória de ATQ cimentada. A amostra (n=23) consistiu de pacientes no primeiro dia de pós-operatório de artroplastia de quadril, com idade entre 60-80 anos, que foram agrupados em 2 grupos, o grupo controle (n=11) recebeu terapia placebo e o grupo tratamento (n=12) eletroanalgesia efetiva. Ambos os grupos receberam a mesma terapia medicamentosa, rotina de cuidados e protocolo fisioterapêutico. A dor foi mensurada através da escala visual analógica e do questionário para dor McGill em 3 etapas (no primeiro e no segundo dia de pós-operatório): antes da aplicação de TENS, imediatamente após a aplicação deste recurso, e após a fisioterapia (realizada após o TENS). Como forma indireta de avaliar a analgesia, também foi registrada a quantidade de medicação analgésica demandada por cada grupo. Os resultados demonstram que o grupo tratamento apresentou melhora nos níveis de dor (p>0,05), bem como menor necessidade de administração de medicamentos analgésicos, o que permite concluir que a TENS é um eficaz recurso como coadjuvante na analgesia pós-operatória durante a fisioterapia em idosos submetidos à ATQ.

PALAVRAS-CHAVES: Analgesia. Artroplastia de Quadril. Estimulação Elétrica Nervosa Transcutânea.

PUBLICAÇÃO NO FIEP BULLETIN ON-LINE: http://www.fiepbulletin.net/80/a2/32